

**ABSTRACT OF THE DISCLOSURE**

A correlator which can be adapted to a receiver for impulse radio includes a multiplier for multiplying a received impulse train by a received template train, an analog integrator for integrating the result of the multiplication, and a quantizer quantizing the result of the integration, which result is supplied to a digital integrator. An adder is provided on the input side of the analog integrator, and a negative feedback path negatively feeds the result of the quantization back to the analog integrator via the adder. Quantization errors occurring in the quantizer are negatively fed back to the analog integrator and thereby integrated, then quantized by the quantizer again. As a result, it is possible to reduce quantization errors and to improve the S/N ratio.